

form of some teaching, suggestion, incentive or inference in the applied prior art, or in the form of generally available knowledge, that one having ordinary skill in the art would have been led to combine the relevant teachings of the applied references in the proposed manner to arrive at the claimed invention. See, for example, Carella v. Starlight Archery, 804 F.2d 135, 231 USPQ 644 (Fed. Cir. 1986); Ashland Oil, Inc. v. Delta Resins & Refractories, Inc., 776 F.2d 281, 227 USPQ 657 (Fed. Cir. 1985). ... "the examiner may provide an explanation based on logic and sound scientific reasoning that will support a holding of obviousness. In re Soli, 317 F.2d 941, 137 USPQ 797 (CCPA 1963)²..."

Wellings does not teach the liquid developer reconstitution compound recited in claim one. Wellings does not teach the use of a second liquid developer. Additionally, Wellings does not teach the dispersion of a first and second liquid developer. Further, Welling does not teach the formation of a second liquid developer by dispersion of a first liquid developer concentrate in a carrier liquid into additional carrier liquid. Still further, Welling does not teach redispersing the reclaimed undeveloped developer cake in a second developer liquid.

When prior art references require selective combination to render obvious a subsequent invention, there must be some reason for the combination other than the hindsight gleaned from the invention itself. Uniroyal Inc. v. Rudkin Wiley Corp., F. 2d, 5 U.S.P.Q. 2d 1435 (Fed. Cir. 1988); Interconnect Planning Corp. v. Feil, 774 F. 2d 1132, 227 U.S.P.Q. 543 (Fed. Cir. 1985). It is impermissible to use the claims as a frame and the prior art references as a mosaic to piece together a facsimile of the claimed invention. Uniroyal Inc. v. Rudkin Wiley Corp., F. 2d, 5 U.S.P.Q. 2d 1435 (Fed. Cir. 1988); W. L. Gore and Associates, Inc. v. Garlock, Inc., 721 F. 2d 1540, 220 U.S.P.Q. 303 (Fed. Cir. 1983).

The Examiner appears to have considered various portions of the references cited, in each instance viewing the cited portion in isolation from the context of the entire reference, and combined these isolated portions to arrive at the present invention with the benefit of hindsight. Using hindsight or applying the

benefit of the teachings of the present application when determining obviousness, however, is impermissible; the references applied must be reviewed without hindsight, must be reviewed as a whole, and must suggest the desirability of combining the references. Lindemann Maschinenfabrik v. American Hoist & Derrick Co., 221 U.S.P.Q. 481 (Fed. Cir. 1984). There is not suggestion in the cited reference to combine elements in the manner suggested by the Examiner.

The consistent criterion for determination of obviousness is whether the prior art would have suggested to one of ordinary skill in the art that this process should be carried out and would have a reasonable likelihood of success, viewed in the light of the prior art. Both the suggestion and the expectation of success must be founded in the prior art, not in the applicant's disclosure. In re Dow Chemical, 5 U.S.P.Q. 2d 1529 (Fed. Cir. 1988).

There is no suggestion in Wellings, Lane, nor Liu to combine the disclosures in the manner articulated by the Examiner. Without such a suggestion, there can not be any expectation of success.

One must avoid reading the applicant's statements into the prior art - see if the prior art, without the benefit of the applicant's disclosures, would make the invention as a whole obvious. In re Sponnoble, 160 U.S.P.Q. 237 (CCPA 1969).

Liu does not teach the use of a second liquid developer. Liu does not teach redispersing of the reclaimed undeveloped developer cake in a second liquid developer. Further, Liu does not teach or suggest the use of a second liquid developer which is dielectric.

None of the cited references suggests or teaches the desirability of combining the elements of the present invention as claimed. Obviousness cannot be established by combining references to arrive at the claimed invention, absent some teaching, suggestion, or incentive supporting the combination. In re Geiger, 2 U.S.P.Q. 2d 1276 (Fed. Cir. 1987); Carella v. Starlight Archery and Pro Line Co., 804 F.2d 135, 231 U.S.P.Q. 644 (Fed. Cir. 1986); ACS Hospital Systems, Inc. v. Montefiore Hospital, 732 F.2d 1572, 221 U.S.P.Q. (BNA) 929 (Fed. Cir. 1984).

In the instant application, the Examiner indicates that it would have been obvious for a person having ordinary skill in the art to combine the liquid developer concentrate comprising a surfactant as disclosed by Lane with the teachings of Wellings and/or Liu to arrive at the applicant's invention. The Examiner has not provided any reason or suggestion for the combination under than the hindsight taken from the applicant's invention. There is no suggestion in Wellings, Liu, nor Lane for such a combination.

The Examiner is using Appellant's disclosure as a recipe for selecting the appropriate portions of the prior art to construct Appellant's invention. A piecemeal reconstruction of the prior art patents in light of Appellant's disclosure is not a basis for a holding of obviousness. In re Kamm et al., 172 U.S.P.Q. 298 (C.C.P.A. 1972). The mere fact that the prior art devices could have been modified does not make the modification obvious unless the prior art suggested the desirability of such a modification. In re Gordon, 221 U.S.P.Q. 1125, (Fed. Cir. 1984); Jones v. Hardy, 220 U.S.P.Q. 1021, (Fed. Cir. 1984). It is clear that the combination of patents does not suggest that the modifications proposed by the Examiner be made.

As the Court of Appeals for the Federal Circuit stated in Yamanouchi Pharmaceutical Co. v. Danbury Pharmacal Inc., 56 USPQ2d, 1641 (Fed. Cir. 2000) at 1644:

This court has recently reemphasized the importance of the motivation to combine:

As this court has stated, "virtually all [inventions] are combinations of old elements." Therefore, an examiner [or accused infringer] may often find every element of a claimed invention in the prior art. If identification of each claimed element in the prior art were sufficient to negate patentability, very few patents would ever issue. Furthermore, rejecting patents solely by finding prior art corollaries for the claimed elements would permit an examiner [or accused infringer] to use the claimed

invention itself as a blueprint for piecing together elements in the prior art to defeat the patentability of the claimed invention.

....

... To counter this potential weakness in the obviousness construct, the suggestion to combine requirement stands as a critical safeguard against hindsight analysis and rote application of the legal test for obviousness.

In re Rouffet, 149 F.3d 1350, 1357-58, 47 USPQ2d 1453, 1457 (Fed. Cir. 1998) (internal citations omitted).

For the instant application, the Examiner also appears to have attempted to use the claimed invention as a blueprint for piecing together elements in the prior art to defeat the patentability of the claimed invention. This method is clearly impermissible. Nothing in any of the cited references teaches or suggests the combination of elements recited in the instant claims.

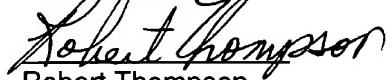
Accordingly, reconsideration and withdrawal of the rejection under 35 USC 103 are respectfully requested.

In the event the Examiner considers personal contact advantageous to the disposition of this case, the Examiner is hereby authorized to call Applicant's Attorney, Robert Thompson, at Telephone Number (716) 423-2050, Rochester, New York.

Application No. 09/514,699

No additional fee is believed to be required for this amendment.
However, the undersigned Xerox Corporation attorney hereby authorizes the
charging of any necessary fees, other than the issue fee, to Xerox Corporation
Deposit Account No.24-0025.

Respectfully submitted,



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July 23, 2001
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VERSION WITH MARKINGS TO SHOW CHANGES MADE:

IN THE SPECIFICATION:

Amended paragraph on page 15, beginning at line 27:

--v) nonionic surfactants, for example, SOLSPERSE® dispersants available from Avecia (formerly Zeneca), such as, SOLSPERSE® 17000, see for example <<http://www.aveciapigments.com/additive/whatisol.htm#design>>. Nonionic surfactants with a hydrophobe-lipophobe balance (HLB) values in the range of about 8 to about 24 are useful in the present application, and nonionic surfactants with an HLB in the range of from about 10 to about 20 are preferred. The HLB values were determined by the procedure of Becher, P. and Birkmeier, R.L., see *J. Am. Oil Chem. Soc.*, 41(1964):169.--

Amended paragraph on page 17, beginning at line 29:

--The liquid developers of the invention may be made with any suitable dispersion medium. Nonpolar liquids useful as a dispersion medium are, preferably, branched-chain aliphatic hydrocarbons. These include, for example, [Isopar] ISOPAR®-G, [Isopar] ISOPAR®-H, [Isopar] ISOPAR®-K, [Isopar] ISOPAR®-L, [Isopar] ISOPAR®-M, and [Isopar] ISOPAR®-V. These hydrocarbon liquids are narrow cuts of isoparaffinic hydrocarbon fractions with extremely high levels of purity. They are substantially odorless, possessing a very mild paraffinic odor. They have excellent odor stability and are all manufactured by the Exxon Corporation. High-purity normal paraffinic liquids, [Norpar] NORPAR®12, [Norpar] NORPAR®13 and [Norpar] NORPAR®15 (Exxon Corporation) may also be used. These hydrocarbon liquids have flash points ranging from 69°C to 118°C. All of these dispersion medium nonpolar liquids have an electrical volume resistivity in excess of 10⁹ ohm-centimeters and a dielectric constant below 3.0. The vapor pressures at 25°C are less than 10 Torr. While [Isopar] ISOPAR® and [Norpar] NORPAR® are preferred dispersant nonpolar liquids, the essential characteristics of all suitable dispersant nonpolar liquids are the electrical volume resistivity and the dielectric constant. In addition, a feature of the dispersion medium nonpolar liquids is a Kauri-butanol value less than 30, preferably in the vicinity of 27 or 28 as

determined by ASTM D 1133. The ratio of thermoplastic resin to dispersion medium nonpolar liquid is such that the combination of ingredients is fluid at the working temperature. In preferred embodiments, the toner particles are present in an amount between about 0.1 to about 15% by weight, preferably 0.3 to 3.0, and more preferably a 0.5 to 2.0 weight percent with respect to the total liquid developer.--

Amended paragraph on page 19, beginning at line 7:

--Suitable resins include, for example, poly(methyl acrylate) poly(methyl methacrylate), poly(ethyl methacrylate), poly(hydroxy-ethyl methacrylate), poly(2-ethoxyethyl methacrylate), poly(butoxy ethoxyethyl methacrylate), poly(dimethyl amino ethyl acrylate), poly(acrylic acid), poly(methacrylic acid), poly(acrylamide), poly(methacrylamide), poly(acrylonitrile), poly(vinyl chloride) and poly(ureidoethyl vinyl ether). Other useful thermoplastic resins or polymers include ethylene vinyl acetate (EVA) copolymers, ELVAX® resins from du Pont , Wilmington, Del., copolymers of ethylene and an alpha-beta ethylenically unsaturated acid selected from the group consisting of acrylic acid and methacrylic acid, copolymers of ethylene (80 to 99.9%)/acrylic or methacrylic acid (20 to 0%)/alkyl(C1 to C5) ester of methacrylic or acrylic acid (0 to 20%), polyethylene, polystyrene, isotactic polypropylene (crystalline), and ethylene ethyl acrylate series sold under the trademark [Bakelite] BAKELITE® DPD 6169, DPDA 6182 Natural and DTDA 9169 Natural and DQDA 6832 Natural 7 from Union Carbide Corp; [Surlyn] SURLYN® ionomer resin from du Pont, Wilmington, Del., or blends thereof, polyester, polyvinyl toluene, polyamides, styrene/butadiene copolymers and epoxy resins.

Other resins include acrylic resins, such as a copolymer of acrylic or methacrylic acid, and at least one alkyl ester of acrylic or methacrylic acid wherein alkyl is 1-20 carbon atoms, for example, methyl acrylate (50-90%)/methacrylic acid (0-20%)/ethylhexyl methacrylate (10-50%); and other acrylic resins including [Elvacite] ELVACITE® acrylic resins, from du Pont, Wilmington, Del., or blends of resins, polystyrene, and polyethylene.--

Amended paragraph on page 25, beginning at line 1:

--PREPARATION OF LIQUID DEVELOPER WITH A RECONSTITUTION PROMOTING COMPOUND One hundred sixty point four (160.4) grams of [Nucrel] NUCREL RX-76®, a copolymer of ethylene and methacrylic acid with a melt index of about 800, available from E.I. DuPont de Nemours & Company, Wilmington, Del., 2.0 grams of Alohas(as defined below) powder and 405 grams of ISOPAR-M® from Exxon Corporation, were added to a Union Process 1S attritor(Union Process Company, Akron, Ohio) charged with 0.1857 inch (4.76 millimeters) diameter carbon steel balls. The mixture was milled in the attritor, which was heated with running steam through the attritor jacket to about 80°C to 115°C. for 15 minutes. Next, 107.6 grams of the magenta pigment(Sun Rhodamine Y 18:3) from Sun Chemicals was added to the attritor. The resulting mixture was milled in the attritor, which was maintained at 80°C to 115°C for 2 hours with running steam through the attritor jacket. 675 Grams of ISOPAR-M® were added to the attritor at the conclusion of 2-hours, and cooled to 23°C by running water through the attritor jacket, and the contents of the attritor were ground for an additional 4 hours. About 600 grams of additional ISOPAR-M® was added and the mixture was separated from the steel balls.

The liquid developer solids content consists of a mixture of 40 percent by weight of Rhodamine Y magenta pigment; 0.7 percent by weight Alohas as charge acceptance agent bound to the toner resin, and 59.3 percent by weight [Nucrel] NUCREL RX-76® toner resin. The liquid developer solids content is 13.313 percent by weight and the [Isopar] ISOPAR-M® level is 86.687 percent by weight. To a 100 gram sample of the above mixture from the attritor (13.313 percent solids) was added 66.4 gram of ISOPAR-M® and 0.62 gram of poly(ethylene oxide-g-dimethyl siloxane) reconstitution promoting compound with a 5 weight percent of ethylene oxide in the graft copolymer. The mixture was then roll milled with 3/16" steel shots for four hours to provide a working developer with 8% toner solids and 0.37% poly(ethylene oxide-g-dimethyl siloxane) reconstitution promoting compound. The developer was used in liquid development and the undeveloped cake portion was reclaimed and redispersed in liquid carrier or liquid developer to form reclaimed liquid developer that was suitable for liquid redevelopment.--

Amended paragraph on page 26, beginning at line 14:

--One hundred forty six point two (146.2) grams of [Nucrel] NUCREL RX-76[®], a copolymer of ethylene and methacrylic acid with a melt index of about 800, available from E.I. DuPont de Nemours & Company, Wilmington, Del., and 405 grams of ISOPAR-M[®] (Exxon Corporation) were added to a Union Process 1S attritor (Union Process Company, Akron, Ohio) charged with 0.1857 inch (4.76 millimeters) diameter carbon steel balls. The mixture was milled in the attritor, which was heated with running steam through the attritor jacket to about 80°C to 115°C. for 15 minutes. Next, 107.6 grams of the magenta pigment(Sun Rhodamine Y 18:3) available from Sun Chemicals, and 16.2 grams of a reconstitution promoting compound Elvax 200W, available from E.I. DuPont de Nemours & Company, was added to the attritor. The resulting mixture was milled in the attritor, which was maintained at 80°C to 115°C for 2 hours with running steam through the attritor jacket. 675 Grams of ISOPAR-M[®] were added to the attritor at the conclusion of 2 hours, and cooled to 23°C by running water through the attritor jacket, and the contents of the attritor were ground for an additional 4 hours. Additional ISOPAR-M[®], about 600 grams, was added and the mixture was separated from the steel balls.--

Amended paragraph on page 27, beginning at line 1:

--The liquid developer solids contain 40 percent by weight of Rhodamine Y magenta pigment; 6% ELVAX 200W reconstitution promoting compound and 54 percent [Nucrel] NUCREL RX-76[®] toner resin. The solids level was 12.873 percent and the Isopar M level was 87.127 percent of this developer.--

IN THE CLAIMS:

3. (Amended) A process in accordance with **claim 1**, further comprising where the developer cake on the a liquid receiver member is charged by a corona charger prior to developing [an] the image.

5. (Amended) A process in accordance with **claim 1**, further comprising continuously measuring the solids content or solids concentration of the second liquid [develop] developer in [the] a developer sump.

7. (Amended) A process in accordance with **claim 1**, further comprising transferring the developed image to a [second] receiver substrate.

Claims 2, and 5-8 have been cancelled.